

Switch ON the SPIRE Spectrometer
 File: H_FCP_SPI_SDEN.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to switch ON the Spectrometer Detectors (SDET)

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

SPIRE is in SMEC_INIT mode

End of Procedure

SPIRE is in SPECSTBY mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HFSSDEN

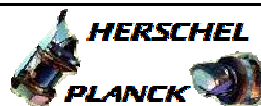
Referenced Displays

ANDs **GRDs** **SLDs**
 SA_6_559
 SA_4_559
 SA_5_559
 ZAZ08999
 SAF0_559

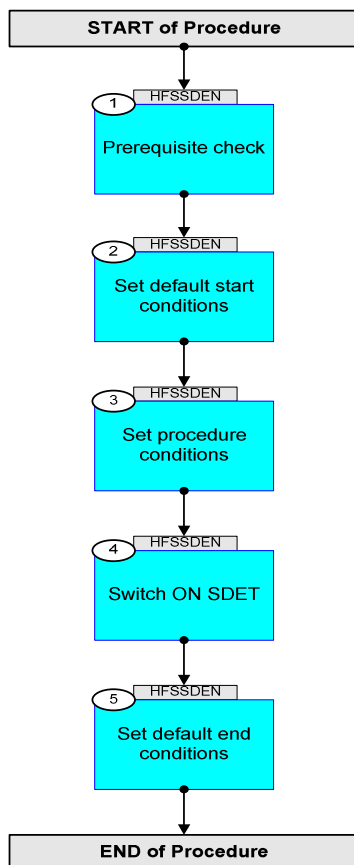
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
07/08/2007		1	Created	R. Biggins	
15/01/2008		2	Update due to initial testing against the simulator: 2 - TCs updated due to new DB	R. Biggins	

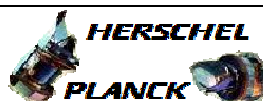
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Procedure Flowchart Overview

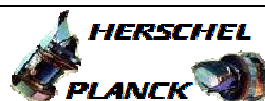


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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
HFSSDEN Switch ON SDET				
SSID :				
1		Prerequisite check		Next Step: 2
		Verify Telemetry MODE SM00M500	= SMEC_INIT	AND=SA_6_559
		Verify Telemetry SLIABITSTAT SM_1X520	= OFF	AND=SA_4_559
		Verify Telemetry SPECJFETSTAT SMF0F510	= 0 <hex>	AND=SA_5_559
		Verify Telemetry SSWJFET1V SM00V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry SSWJFET2V SM01V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry SLWJFET1V SM10V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry SLIAP5V SML3V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry SLIAP9V SML4V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry SLIAM9V SML5V510	= 0.0 V	AND=SA_5_559
		Verify Telemetry BSW_SDB_ActProf DEF5F160	= 3 <dec>	AND=ZAZ08999
2		Set default start conditions		Next Step: 3
	ET=+00.00.00 UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80010001 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 1 <hex>	
	ET=+00.00.00 UT=+00.00.00	SET_OBSID SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC000500 B0000000 <hex>	
	ET=+00.00.01 UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	
	ET=+00.00.00 UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80000000 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	
	ET=+00.00.01 UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80020001 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 1 <hex>	
3		Set procedure conditions		Next Step: 4
	ET=+00.00.01 UT=+00.00.01	RESET_DRCU_COUNTERS RESET_DRCU_COUNTERS TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD00505	
	ET=+00.00.01 UT=+00.00.01	SET_OBSID SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC000500 OBS_ID	

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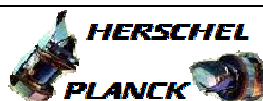
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	
	ET=+00.00.01 UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80000000 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	
	ET=+00.00.00 UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 86000001 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC002500 206 <hex>	
4		Switch ON SDET		Next Step: 5

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SPD03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 1 <hex>	
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetDRelONOff SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 A0870006 <hex> 0 <hex> (Def)	
		Verify Telemetry SCUFRAMECONF SM_0N520	= 0006 <hex>	AND=SA_4_559
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetSpectroBiasMode SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843000FF <hex> 0 <hex> (Def)	
		Verify Telemetry SPECBIASMODE SMB1M510	= FF <hex>	AND=SAF0_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetSpectroMClkDiv SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84390079 <hex> 0 <hex> (Def)	
		Verify Telemetry SPECMCLKDIV SMB2H510	= 0079 <hex>	AND=SAF0_559

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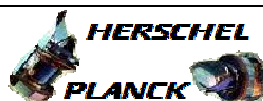
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetSpectroBiasDiv SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84380001 <hex> 0 <hex> (Def)	
		Verify Telemetry SPECBIASDIV SMF0H510	= 1 <hex>	AND=SAF0_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetSpectroBiasAmpl (SW channels) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84310002 <hex> 0 <hex> (Def)	
		Verify Telemetry SSWBIAS SMB4V510	= 1.38 mV	AND=SAF0_559
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetSpectroBiasAmpl (LW channels) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84320002 <hex> 0 <hex> (Def)	
		Verify Telemetry SLWBIAS SMB5V510	= 1.38 mV	AND=SAF0_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetPhaseShift (SW channels) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843A0080 <hex> 0 <hex> (Def)	
		Verify Telemetry SSWPHASE SM00R510	= 180.71 deg	AND=SAF0_559

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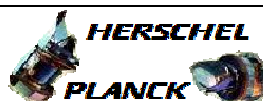
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetPhaseShift (LW channels) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843B007F <hex> 0 <hex> (Def)	
		Verify Telemetry SLWPHASE SM10R510	= 179.29 deg	AND=SAF0_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetDCUDataMode SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843C0014 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATAMODE SMD0M510	= SOFFSET	AND=SA_5_559
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetDCUStartFrame SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843E0001 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATASTAT SMD2F510	= RUN	AND=SA_5_559
	ET=+00.00.02 UT=+00.00.02	Send DRCU command to SetDCUStartFrame SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843E0000 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATASTAT SMD2F510	= OFF	AND=SA_5_559

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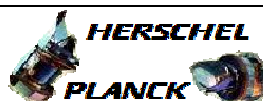
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetDCUDataMode SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843C001C <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATAMODE SMD0M510	= SOFFGET	AND=SA_5_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetDCUStartFrame SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843E0001 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATASTAT SMD2F510	= RUN	AND=SA_5_559
	ET=+00.00.03 UT=+00.00.03	Send DRCU command to SetDCUStartFrame SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843E0000 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATASTAT SMD2F510	= OFF	AND=SA_5_559
	ET=+00.00.00 UT=+00.00.00	FLUSH_FIFO FLUSH_FIFO Command Parameter(s) : FIFOFLAGS SPD0N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD01505 1000 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetDCUDataMode SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843C0004 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATAMODE SMD0M510	= SPEC	AND=SA_5_559
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to SetDCU FrameCount SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843D0000 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATAFRMS SMD0N510	= CONTINUOUS	AND=SA_5_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetDCUStartFrame SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 843E0001 <hex> 0 <hex> (Def)	
		Verify Telemetry DCUDATASTAT SMD2F510	= RUN	AND=SA_5_559
	ET=+00.00.04 UT=+00.00.04	Send DRCU command to SetSSWJFETSourceVoltage (Ch 1) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84350057 <hex> 0 <hex> (Def)	
		Ensure that the following parameter is < 0 (nominally within approximately -1V and -3V)		
		Verify Telemetry SSWJFET1V SM00V510	= -1.68 V	AND=SA_5_559

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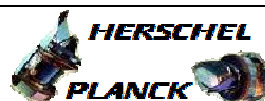
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to Set SLW/SSW JFET Bias Settings SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : SSID : 370 GBM IL DSE --- -- ---	SCD06505 84370002 <hex> 0 <hex> (Def)	
		Verify Telemetry SPECJFETSTAT SMF0F510	= 0002 <hex>	AND=SA_5_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command to SetSSWJFETSourceVoltage (Ch 2) SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : SSID : 370 GBM IL DSE --- -- ---	SCD06505 8436006B <hex> 0 <hex> (Def)	
		Ensure that the following parameter is < 0 (nominally within approximately -1V and -3V)		
		Verify Telemetry SSWJFET2V SM01V510	= -2.07 V	AND=SA_5_559
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to Set SLW/SSW JFET Bias Settings SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : SSID : 370 GBM IL DSE --- -- ---	SCD06505 84370006 <hex> 0 <hex> (Def)	
		Verify Telemetry SPECJFETSTAT SMF0F510	= 0006 <hex>	AND=SA_5_559
	ET=+00.00.01 UT=+00.00.01	Send DRCU command SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : SSID : 370 GBM IL DSE --- -- ---	SCD06505 84340052 <hex> 0 <hex> (Def)	

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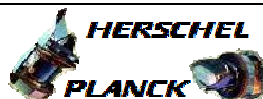
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	Send DRCU command to Set SLW/SSW JFET Bias Settings SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SCD06505 84370007 <hex> 0 <hex> (Def)	
		Verify Telemetry SPECJFETSTAT SMF0F510	= 0007 <hex>	AND=SA_5_559
	ET=+00.00.01 UT=+00.00.01	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC002500 400 <hex>	
		Verify Telemetry MODE SM00M500	= SPECSTBY	AND=SA_6_559
		Verify Telemetry SLIAP5V SML3V510	= 5.0 V	AND=SA_5_559
		Verify Telemetry SLIAP9V SML4V510	= 11.5 V	AND=SA_5_559
		Verify Telemetry SLIAM9V SML5V510	= -11.5 V	AND=SA_5_559
		Ensure that the following parameter is < 0 (nominally within approximately -1V and -3V)		
		Verify Telemetry SLWJFET1V SM10V510	= 0.0 V	AND=SA_5_559
5		Set default end conditions		Next Step: END
	ET=+00.00.00 UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80000000 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 0 <hex>	
	ET=+00.00.00 UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC001500 80030001 <hex>	
	ET=+00.00.02 UT=+00.00.02	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC003500 1 <hex>	
	ET=+00.00.00 UT=+00.00.00	SET_OBSID SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 TC Control Flags : GBM IL DSE --- -- --- SSID : 370	SC000500 B0000000 <hex>	

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	ET=+00.00.00 UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE --- -- -- SSID : 370	SC001500 80000000 <hex>	
End of Procedure				